

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. **(Currently Amended)** A multireactive polymerizable mesogenic compound of formula I



wherein

R^1 is halogen, CN, OCN, NCS, NO_2 or ~~a chiral or achiral an~~ alkyl radical with 1 to 30 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, optionally one or more non-adjacent CH_2 groups being replaced, in each case independently from one another, by -O-, -S-, -NH-, -N(CH₃)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another, or alternatively has one of the meanings of R^2 or is P-(Sp-X)_n-,

P is a polymerizable group,

Sp is a spacer group with 1 to 25 C atoms,

X is -O-, -S-, -CO-, -COO-, -OCO-, -OCO-O-, -CO-NH-,
-NH-CO-, -OCH₂-, -CH₂O-, -SCH₂-, -CH₂S-, -CH=CH-COO-, -OOC-CH=CH-
or a single bond,

n is 0 or 1,

MG is a mesogenic group, and

R^2 is straight-chain or branched alkyl with 1 to 25 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, optionally one or more non-adjacent CH_2 groups being replaced, in each case independently from one another, by -O-,

-S-, -NH-, -N(CH₃)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another, and which is substituted with at least two identical or different groups P.

2. **(Currently Amended)** A multireactive polymerizable mesogenic compound according to claim 1, wherein R¹ is not a non-polymerizable polymerizable group.

3. **(Original)** A multireactive polymerizable mesogenic compound according to claim 1, wherein R¹ has one of the meanings of R².

4. **(Original)** A multireactive polymerizable mesogenic compound according to claim 1, wherein MG is of formula II



wherein

Z is -O-, -S-, -CO-, -COO-, -OCO-, -CO-NH-, -NH-CO-, -CH₂CH₂-, -OCH₂-, -CH₂O-, -SCH₂-, -CH₂S-, -CH=CH-, -CH=CH-COO-, -OCO-CH=CH-, -C≡C- or a single bond,

A¹ and A² are each independently 1,4-phenylene in which, in addition, one or more CH groups are optionally replaced by N; 1,4-cyclohexylene in which, in addition, one or two non-adjacent CH₂ groups are optionally replaced by O and/or S; 1,4-cyclohexenylene; 1,4-bicyclo(2,2,2)octylene; piperidine-1,4-diyl; naphthalene-2,6-diyl; decahydronaphthalene-2,6-diyl; or 1,2,3,4-tetrahydro-naphthalene-2,6-diyl; all these groups optionally being

unsubstituted, mono- or polysubstituted with F, Cl, OH, CN, NO₂ or alkyl, alkoxy, alkylcarbonyl or alkoxy carbonyl groups having 1 to 7 C atoms wherein one or more H atoms may be substituted by F or Cl, and

m is 1, 2 or 3.

5. **(Original)** A multireactive polymerizable mesogenic compound according to claim 1, wherein P is selected from CH₂=CW-COO-, WCH=CH-O-, CH₂=CH-Phenyl-(O)_k-

and WHC—CH—, with W being H, CH₃ or Cl and k being 0 or 1.

6. **(Original)** A multireactive polymerizable mesogenic compound according to claim 1, wherein R² is substituted with 2, 3, 4 or 5 identical or different polymerizable groups P.

7. **(Previously presented)** A multireactive polymerizable mesogenic compound according to claim 1, wherein R² is a group of one of the following formulae

-X-alkyl-CHP¹-CH₂-CH₂P² Ia

-X-alkyl-C(CH₂P¹)(CH₂P²)-CH₂P³ Ib

-X-alkyl-CHP¹CHP²-CH₂P³ Ic

-X-alkyl-C(CH₂P¹)(CH₂P²)-C_aH_{2a+1} Id

-X-alkyl-CHP¹-CH₂P² Ie

-X-alkyl-CHP¹P² If

-X-alkyl-CP¹P²-C_aH_{2a+1} Ig

-X-alkyl-C(CH₂P¹)(CH₂P²)-CH₂OCH₂-C(CH₂P³)(CH₂P⁴)CH₂P⁵ Ih

-X-alkyl-CH((CH₂)_aP¹)((CH₂)_bP²) II

-X-alkyl-CHP¹CHP²-C_aH_{2a+1}

Ik

wherein

alkyl is straight-chain or branched alkylene with 1 to 12 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, one or more non-adjacent CH₂ groups optionally being replaced, in each case independently from one another, by -O-, -S-, -NH-, -N(CH₃)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another,

a and b are identical or different integers from 0 to 6,

X has one of the meanings given in formula I, and

P¹ to P⁵ independently have one of the meanings of P given in formula I.

8. (Previously presented) A multireactive polymerizable mesogenic compound according to claim 5, wherein R² is a group of one of the following formulae

-X-alkyl-CHP¹-CH₂-CH₂P²

Ia

-X-alkyl-C(CH₂P¹)(CH₂P²)-CH₂P³

Ib

-X-alkyl-CHP¹CHP²-CH₂P³

Ic

-X-alkyl-C(CH₂P¹)(CH₂P²)-C_aH_{2a+1}

Id

-X-alkyl-CHP¹-CH₂P²

Ie

-X-alkyl-CHP¹P²

If

-X-alkyl-CP¹P²-C_aH_{2a+1}

Ig

-X-alkyl-C(CH₂P¹)(CH₂P²)-CH₂OCH₂-C(CH₂P³)(CH₂P⁴)CH₂P⁵

Ih

-X-alkyl-CH((CH₂)_aP¹)((CH₂)_bP²)

Ii

wherein

alkyl is straight-chain or branched alkylene with 1 to 12 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, one or more non-adjacent CH₂ groups optionally being replaced, in each case independently from one another, by -O-, -S-, -NH-, -N(CH₃)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another,

a and b are identical or different integers from 0 to 6,

X has one of the meanings given in formula I, and

P¹ to P⁵ independently have one of the meanings of P given in formula I.

9. **(Previously presented)** A multireactive polymerizable mesogenic compound according to claim 7, wherein alkyl is -(CH₂)_c-, with c being an integer from 1 to 12.

10. **(Original)** A multireactive polymerizable mesogenic compound according to claim 1, wherein each P is independently of each other acrylate, methacrylate, vinyl, vinyloxy, epoxy or p-vinylphenyloxy.

11. **(Withdrawn)** A polymerizable mesogenic composition comprising at least two components, wherein at least one component is a compound according to claim 1.

12. **(Withdrawn)** A linear or crosslinked polymer obtained by polymerizing a polymerizable mesogenic compound according to claim 1.

13. **(Withdrawn)** A linear or crosslinked polymer obtained by polymerizing a polymerizable mesogenic composition according to claim 11.

14. **(Withdrawn)** A polarizer, optical retardation or compensation film, alignment layer, colour filter, holographic element, liquid crystal display, PDLC, polymer gel, polymer stabilized cholesteric texture (PSCT) display, adhesive, synthetic resins with anisotropic mechanical properties, cosmetic, diagnostic, liquid crystal pigment for decorative and/or security applications, or article for nonlinear optics or optical information storage comprising a compound according to claim 1.

15. **(Withdrawn)** A polarizer, optical retardation or compensation film, alignment layer, colour filter, holographic element, liquid crystal display, PDLC, polymer gel, polymer stabilized cholesteric texture (PSCT) display, adhesive, synthetic resins with anisotropic mechanical properties, cosmetic, diagnostic, liquid crystal pigment for decorative and/or security applications, or article for nonlinear optics or optical information storage comprising a composition according to claim 11.

16. **(Withdrawn)** A polarizer, optical retardation or compensation film, alignment layer, colour filter, holographic element, liquid crystal display, PDLC, polymer gel, polymer stabilized cholesteric texture (PSCT) display, adhesive, synthetic resins with anisotropic mechanical properties, cosmetic, diagnostic, liquid crystal pigment for decorative

and/or security applications, or article for nonlinear optics or optical information storage comprising a polymer according to claim 12.

17. (Withdrawn) A multireactive polymerizable mesogenic compound according to claim 8, wherein alkyl is $-(CH_2)_c-$, with c being an integer from 1 to 12.

18. (New) A multireactive polymerizable mesogenic compound according to claim 1, wherein MG is a group of one of the following formulae II-1 to II-25 or a mirror image thereof:

-Phe-Z-Phe-	II-1
-Phe-Z-Cyc-	II-2
-Cyc-Z-Cyc-	II-3
-PheL-Z-Phe-	II-4
-PheL-Z-Cyc-	II-5
-PheL-Z-PheL-	II-6
-Phe-Z-Phe-Z-Phe-	II-7
-Phe-Z-Phe-Z-Cyc-	II-8
-Phe-Z-Cyc-Z-Phe-	II-9
-Cyc-Z-Phe-Z-Cyc-	II-10
-Phe-Z-Cyc-Z-Cyc-	II-11
-Cyc-Z-Cyc-Z-Cyc-	II-12
-Phe-Z-Phe-Z-PheL-	II-13
-Phe-Z-PheL-Z-Phe-	II-14
-PheL-Z-Phe-Z-Phe-	II-15
-PheL-Z-Phe-Z-PheL-	II-16
-PheL-Z-PheL-Z-Phe-	II-17
-PheL-Z-PheL-Z-PheL-	II-18
-Phe-Z-PheL-Z-Cyc-	II-19
-Phe-Z-Cyc-Z-PheL-	II-20
-Cyc-Z-Phe-Z-PheL-	II-21
-PheL-Z-Cyc-Z-PheL-	II-22
-PheL-Z-PheL-Z-Cyc-	II-23

-PheL-Z-Cyc-Z-Cyc-

II-24

-Cyc-Z-PheL-Z-Cyc-

II-25

wherein Phe is 1,4-phenylene, PheL is a 1,4-phenylene group which is substituted by 1 to 4 groups L, with L being F, Cl, CN, OH, NO₂ or an optionally fluorinated alkyl, alkoxy or alkanoyl group with 1 to 7 C atoms, Cyc is 1,4-cyclohexylene and Z are independently -O-, -S-, -CO-, -COO-, -OCO-, -CO-NH-, -NH-CO-, -CH₂CH₂-, -OCH₂-, -CH₂O-, -SCH₂-, -CH₂S-, -CH=CH-, -CH=CH-COO-, -OCO-CH=CH-, -C≡C- or a single bond.

19. (New) A multireactive polymerizable mesogenic compound according to claim 1, wherein Sp is a linear or branched alkylene group having 1 to 20 C atoms, in which one or more non-adjacent CH₂ groups are optionally replaced by -O-, -S-, -NH-, -N(CH₃)-, -CO-, -O-CO-, -S-CO-, -O-COO-, -CO-S-, -CO-O-, -CH(halogen)-, -CH(CN)-, -CH=CH- or -C≡C-.

20. (New) A multireactive polymerizable mesogenic compound according to claim 1, wherein R¹ is a chiral alkyl radical with 1 to 30 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, optionally one or more non-adjacent CH₂ groups being replaced, in each case independently from one another, by -O-, -S-, -NH-, -N(CH₃)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another.